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[19,1986. 7. 8,04 ] (04,JP,Unexamined Patent Publication,1981031758)

[19,1987. 5.15,04 ] (04,JP,Unexamined Patent Publication,1973062289)

Title of Invention: TRANSFUSION APPARATUS

Abstract: Pressure in the pressure sensor *niyotsute* cylinder which slider was provided with is detected, abnormality such as needle foolishness to be able to put by the end of transfusion by comparing reference value to show abnormal condition to with this pressure, needle *zumari* is detected in *\*kaku*, and transfusion is always performed safely. Pressure sensor 39 detecting fluid pressure in syringe 24 is installed in pressing department 22 pressing with sucker 25, sign S ? P ? R to show pressure to is added to initial value storage circuit 41 and pressure conversion circuit 42 through amplifier 40. This initial value storage circuit 41 offsets thing *niyotsute* pulling line *tsuteirutokino* pressure value by impregnation from this initial pressure value in pressure conversion circuit 42 with a thing storing pressure value when decommissioning time liquid is not poured, temperature drift, drag of syringe 24. Arch forming value evolution circuit 44, disconnection value evolution circuit 45 and each reference value to show abnormality of pressure to from abnormal value evolution circuit 46 are given comparison circuit 43, it is compared with pressure signal S ? P ? S, detection signal S ? A of abnormal condition is added to alarm signal generator 38.

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